



AMENDED CLAIMS

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a1 3. (amended) The method of claim 1 wherein the mine or unexploded ordnance at least partially contacts an overburden comprising ground or debris, said method further comprising removing at least a part of the overburden from the mine or unexploded ordnance by a release of gas.

6. (amended) A method for neutralizing a mine or unexploded ordnance having a casing comprising explosive material, said method comprising:

a2 (a) reacting a compound that undergoes a self propagating high temperature synthesis (SHS) reaction to form high temperature reaction products in quantity and at a rate sufficient to decompose the explosive material, wherein the reaction products are mostly liquid;

(b) limiting the spread of the liquid high temperature reaction products;

(c) supplying an oxygen-rich gas stream to the casing or to the explosive material to enhance decomposition of the casing or burning or decomposition of the explosive material; and

(d) decomposing the explosive material by heating the casing with the high temperature reaction products for a time and at a rate sufficient to increase the pressure in the casing to cause the casing to fracture and, before the explosive material detonates, to (i) scatter the explosive material or (ii) burn or decompose the explosive material for a time sufficient to destroy the explosive material;

A² wherein the reactive compound is selected from the group consisting of (i) an essentially stoichiometric combination of sulfur and a metal selected from the group consisting of zirconium, chromium, indium, titanium, manganese, iron, and blends thereof and (ii) an essentially stoichiometric combination of carbon and a metal selected from the group consisting of hafnium, zirconium, titanium, silicon, and blends thereof; and

wherein the reactive compound consists essentially of particles having particle size less than about 100 microns.
